1703 E. Highway 50 Yankton, SD 57078 USA
Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709
Website: www.mtronpti.com

SPECIFICATION FOR 5x7mm CMOS SMT VCXO
MtronPTI P/N: M3027S007

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		100.000000		MHz	
Frequency Stability						
Frequency Stability	ΔF/F		Included in Absolute Pull Range Specification			
RF Output						
Output Type			LVCMOS			
Output Load			15 pF CMOS load			
Symmetry (duty cycle)	T_{DC}	45		55	%	@ 50% Vdd
Logic "0" Level	V_{OL}			10% Vdd	V	
Logic "1" Level	V_{OH}	90% Vdd			V	
Rise/Fall Time	T_R/T_F			3.0	ns	10% to 90% Vdd
Tristate		Pin 2 high (70% Vdd min.) or NC				Clock signal output
		Pin 2 low (30% Vdd max.)				Output disabled to high Z
Frequency Adjustment						
Control Voltage		0.30	1.65	3.00	V	Pad 1
Absolute Pull Range	APR	-50		+50	ppm	Referenced to Fo, including tolerance at +25 °C, deviation over operating temperature, shock, vibration, supply voltage, and 1 year aging.
Modulation Bandwidth	f_m	5			kHz	-3 dB
Linearity				10	%	
Supply Voltage & Power Consumption						
Operating Voltage	V_{CC}	3.135	3.300	3.465	V	
Supply Current	I_{CC}			45	mA	
Other Parameters						
Start-up Time	T_{SU}			10	ms	$T_{ambient}$ = +25°C
Phase Noise			-90	-80	dBc/Hz	100 Hz offset
			-122	-115	dBc/Hz	1 kHz offset
			-158	-150	dBc/Hz	1MHz offset

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Environmental & Packaging Requirements:

Operating Temperature	T_A	-40		+85	°C	
Storage Temperature	T_S	-55		+125	°C	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave)					
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
Thermal Cycle	Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles)					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10^{-8} atm cc/s of Helium)					
Moisture Sensitivity Level	MSL1					
Solderability	Per EIAJ-STD-002, Method 208					
Max. Soldering Conditions	See solder profile, Figure 1					
Pad Termination	Gold, 1 µm maximum thickness					
Package Type	6-pad 5.0 X 7.0 mm leadless ceramic. RoHS compliant.					

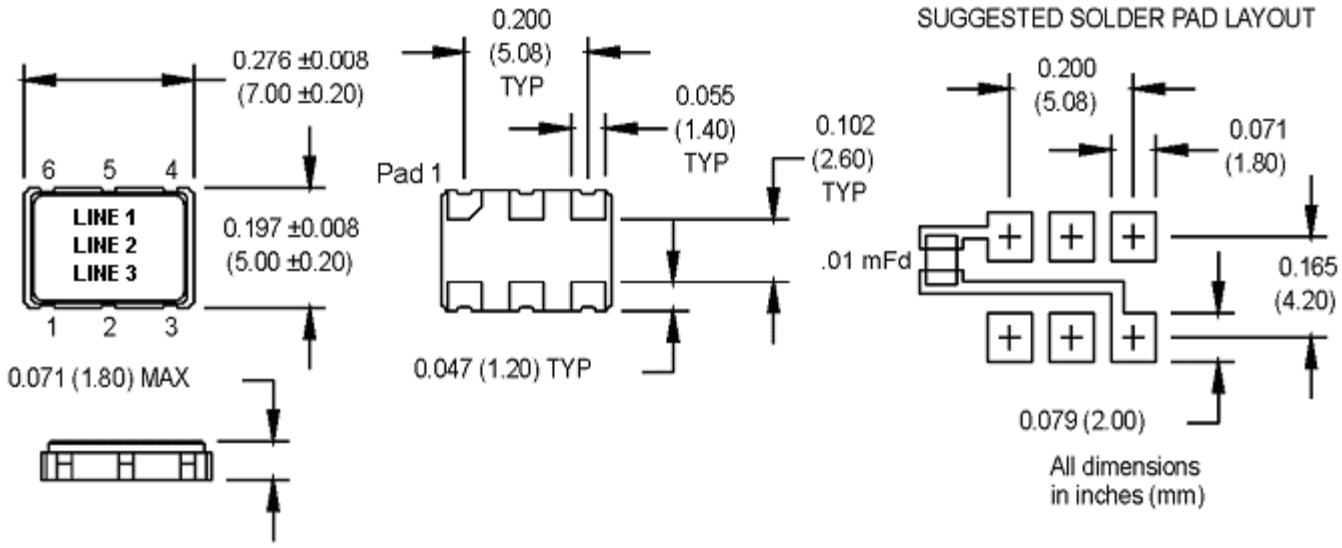
Marking and Pin Out:

Pad	Function
1	Control Voltage
2	Tristate Control
3	Ground
4	Output
5	N/C
6	$+V_{CC}$

Part Marking	
Line 1	M3027S007
Line 2	100M0000
Line 3	M yy ww vv

Legend	
M	MtronPTI
yy	Year
ww	Work Week
vv	Factory code

Dimensions:



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Reflow Soldering Profile:

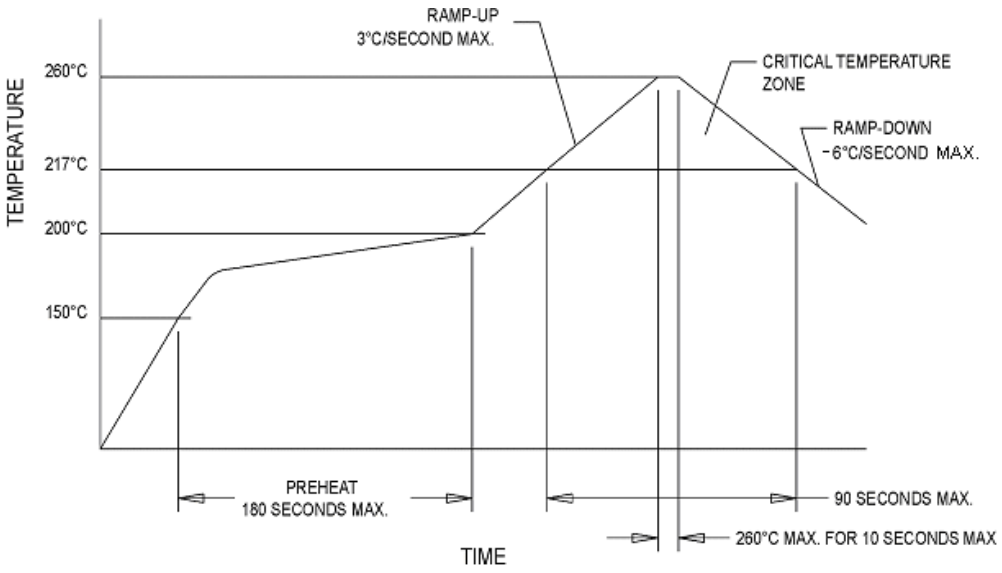

Figure 1

DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision
03/20/19	0	BRR	Original release
04/05/19	A	MM	Updated phase noise specification